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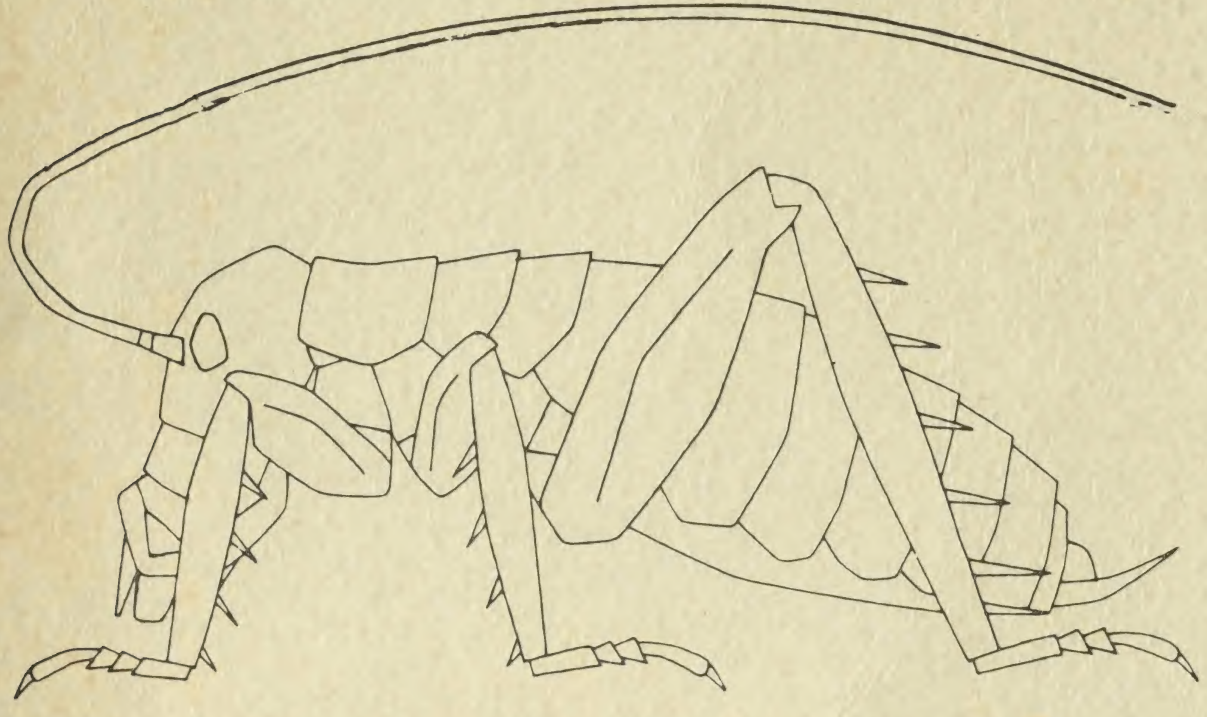

Newsbulletin of The Entomological Society of New Zealand Inc.

VOL. 6 NO. 2 October 1983

J.D. Tenquist,
Editor, The 'Weta',
Wallaceville Animal Research Centre,
Private Bag,
Upper Hutt.

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Publications available from the Entomological Society of New Zealand

Bulletins of the Entomological Society of New Zealand (ISSN 0110-4527)

Bulletin 2: Perspectives in aphid biology. 1973. 123 p. $10.50.

Bulletin 4: Standard names for common insects in New Zealand. 1978. 42 p. $2.00.

Bulletin 5: Guide to the aquatic insects of New Zealand. Michael J. Winterbourn and Katharine L. D. Gregson. 1981. 80 p. $9.00.

Bulletin 6: Photographing insects. Bruce B. Given. 1982. 32 p. $5.00.

Bulletin 7: Guide to New Zealand entomology. Graeme W. Ramsay and Pritam Singh. 1982. 72 p. $9.00.

New Zealand Entomologist (ISSN 0077-9962)

Volumes 1, 4(3), 1970 — 6(4), 1978, $6.00 per issue (9 issues); 7 1979-82, $8.00 per issue (4 issues).

The Weta, news bulletin of the Entomological Society of N.Z. 2 issues per year, $1.00 each.

The preparation and curation of insects. Annette K. Walker and Trevor K. Crosby. 1979. *N.Z. DSIR information series 130.* 55 p. (ISSN 0077-9636). $2.50.

Identification chart of New Zealand butterflies. Drawings by British artist Brian Hargreaves, text by George W. Gibbs. 1980. $3.00. This 400 × 600mm wall chart features 52 life-size paintings in full colour, with brief notes on distribution, food plants, and diagnostic features.

Letter cards. 4 colourful cards featuring butterflies from the identification chart. Write your own message on the inside. Envelopes provided. 30c each, 10 for $2.50.

These publications may be ordered from: Mrs B. M. May, distributions secretary, Entomological Society of N.Z., 6 Ocean View Road, HUIA, Auckland. Prices are in New Zealand currency. Please enclose payment with your orders; overseas orders add $1.00 to cover additional surface-mail postage and packing costs. A free list of all publications available from the Society can be obtained from Mrs May at the above address.

The Entomological Society of New Zealand (Incorporated)

The Society was founded in 1951 to provide a common meeting ground for everyone interested in entomology in New Zealand. It publishes an annual journal, the "New Zealand Entomologist", and occasional bulletins, and holds a conference in May each year. It has helped to prepare the computerised information retrieval database "Bibliography of the non-marine invertebrates of the New Zealand region"; searches of this are available through the library interloan system.

Anyone interested in joining the Society or wanting further information should contact: Mrs S. Millar, Secretary, Entomological Society of N.Z. (Inc.), 8 Maymorn Road, TE MARUA, Upper Hutt.

Local Branches of the parent Society arrange meetings and outings at Auckland (Secretary: Mrs O. Green c/- Plant Health Diagnostic Station, MAF, Private Bag, Auckland), Wellington (Secretary: Mr J. R. Grehan, c/- Zoology Department, Victoria University, Private Bag, Wellington), and Dunedin (Secretary: Mr R. D. Archibald, c/- Microbiology Department, Otago University, P.O. Box 56, Dunedin).

21st Anniversary Research Fund. This fund was set up in 1973 to foster the objectives of the Society ("The improvement and diffusion of entomological knowledge in New Zealand"). Contributions or gifts to this fund by individuals or companies are welcomed; the Commissioner for Inland Revenue recognises that payments to the fund are tax-deductible. (Information: Professor R. A. Harrison, P.O. Box 95, Lincoln College, Canterbury, or Mr R. L. Palma, National Museum, Private Bag, Wellington).

Applications for grants from the fund can be made by both members and non-members and societies or groups. The applications are referred to a Grants Committee comprising 3 people (a Convenor, President of the Royal Society of N.Z., President of the Entomological Society of N.Z.) for consideration and decision, and the successful applicants are announced at the annual conference. Since 1975 over $10 000 has been awarded in 35 grants. Applications close at the end of February each year. Further information and application forms are available from: Mrs S. Millar, Secretary, Entomological Society of N.Z. (Inc.), 8 Maymorn Road, Te Marua, Upper Hutt.

THE ENTOMOLOGICAL SOCIETY OF NEW ZEALAND

OFFICE BEARERS 1983-1984

President: Dr A C G Heath

Vice President: Mr J Longworth
Secretary: Mrs S Millar

Treasurer: Dr R Scott
Editor: Dr T Crosby

Librarian: Dr G W Ramsay
Royal Society Representative: Mr R Ordish

Seconded: Mrs P Syrett, Dr R A Galbraith, Mrs B May
Mr J D Tenquist.

BRANCH CHAIRMEN AND SECRETARIES

Auckland: Chairman: Dr P Maddison
Secretary: Mrs O Green PHDS DSIR
Private bag Auckland.

Wellington: Chairman: Mr T Ritzema
Secretary: Mr J Grehan Zoology Dept. Victoria University Private bag Wellington.

Dunedin: Chairman: Mr Brian Patrick
Secretary: Mr Graeme Bremner, Zoology Dept.
Otago Museum, PO Box 156 Dunedin.

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THE IMPORTANCE OF DOCUMENTATION

I wonder how many societies are as well organised as the Entomological Society of New Zealand? We seem to have a remarkable team of people who will document just about anything at the drop of a hat! But that's good - I couldn't agree more. I think it is very important that records should be properly documented and catalogued so as to be readily available to whoever needs them for whatever purpose. Even with computers, some people just cannot get their societies functioning properly with the result that nobody knows what the hell is going on - a quick way to dissolution of what could be a worthwhile body.

It is useful to know what sort of insects or trees are to be found in a particular habitat or reserve. It is useful to have a list of past Presidents and their executives, or an updated membership list readily available when it is needed. Checklists of our flora and fauna provide an invaluable tool for researchers. Just look at the work that has gone into the bibliography - another vital list.

Keep up the good work.

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SUBFOSSIL INSECTS - A KEY TO PAST DIVERSITY

T H Worthy
Waitomo Caves Museum
PO Box 18
WAITOMO

It is well known that insects like to hide - during daylight carabids hide under logs or go into hidden recesses in the ground. Weevils lie hidden in trees. But 15m below theground surface, under half a metre of sediment topped by a fetid pool? Cow, sheep and opossum remains slowly decaying in putrid water guard what must have been the deepest, darkest, foulest beetle haven ever found!

This "haven" is actually a 10cm thick layer of sediment in a cave at Waitomo. The well preserved remains of at least 15 species of ground beetle and a dozen species of weevil have been discovered in this unlikely location. They were found amongst hundreds of bones belonging to 18 species of birds. This deposit is unique among those so far encountered in New Zealand, not because of the avian remains but because it is the first time significant numbers of sub-fossil insect remains have been found in caves.

The conditions which permitted the preservation of insect remains resulted in the occurrence of sub-fossil plant remains, mainly seeds, providing data on the adjacent vegetation at the time. Thus a picture of a small forest tarn surrounded by matai, miro, rimu and hinau with an understory of horopito and tree ferns is reconstructed.

Ducks swam on the tarn - takahe, kakapo, weka, kiwi and giant rail roamed the forest floor, along with several moa species. Kaka, kokako and pigeon frequented the trees. Tuataras, several species of native lizards and native frog also wandered about. Now for the first time we know something about the insect life that occurred prior to human contact.

The species represented are all ground beetles or weevils, no doubt because the heavily sclerotosed exoskeletons of these animals facilitate their preservation. The family Carabidae (6 species) dominated, with the remains of 11 individuals being represented. Seven other families of ground beetle were represented by parts of at least 13 individuals. In addition, the weevils were represented by 12 species.

The deposit is either pit fall or stream wash origin and most of the species represented are ground frequenting or flightless species. Most are common in the remnant forests of the area today, eg. *Mecodema crenaticolle* and *Plocamostethus planiuscalus*. *Zeanecrophilus prolongatus* a carrion feeder is often found in cave entrances today.

At least four new species await discription, all of which are probably extinct. One of these is a ground beetle - a new Zopherid, while the other three are weevils. Two of the latter and the Zopherid are large species at least 20mm long. Large carabids have a defence mechanism (they can produce a pungent odour) and those found in this assemblage are still present today. But

other "giant" insects such as two of the extinct species of weevils - one allied to *Anagotus* the flax weevil - would have been prone to predation and are now presumed extinct.

Outlying islands (the last stronghold of many of our "giant" insect species) have in many cases had rats introduced only recently and often their nests contain large numbers of insect fragments. It is pertinent to note that although many vertebrate remains belonging to either birds, lizards, bats or frogs were found associated with the subfossil insects, no remains of kiore occurred. It did occur in the surface layer; thus it seems probable that these insects were deposited some time prior to human contact in New Zealand.

A palynological analysis of the sediment and a study of the remains of seeds also preserved suggests that while these avian and insect remains were accumulating, a podocarp forest with a canopy dominated by rimu was present. Matai, miro, and hinau were also present. The sub-canopy was similar in species composition to that seen in similar forests today. This evidence suggests that this deposit was laid down between 1000 and 10,000 years BP.

Maoripamborus fairburni, the second most common beetle species represented is now restricted to a small area in the Waipoua forest and an area near Russell in Northland.

Sub-fossil deposits in caves have long contributed evidence to show that the vertebrate fauna (birds, reptiles and amphibians) has been greatly affected in both species composition and distribution. These changes are attributable to alterations made to the environment by either man or the predators he brought with him. However this is the first time sub-fossil deposits have contributed evidence to show that changes in our insect fauna parallel those in our vertebrate fauna.

ACKNOWLEDGEMENTS

It is my pleasure to acknowledge the following for their professional assistance:

Dr G Kuschel and Dr J C Watt for identification and information on the beetles.

Dr D Pocknall for the palynological study on the cave sediments and comment on the probable forest type.

Mrs M J A Bulfin for the identification of seeds and Dr T Crosby for commenting on the script.

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AS MEMBERS WILL HAVE READ IN THE JULY NEWSLETTER, YT IS NOW THE SOCIETY CORRESPONDENT TO THE AUSTRALIAN ENTOMOLOGICAL SOCIETY NEWSLETTER. ENTOMOLOGICAL INFORMATION LIKELY TO BE OF INTEREST TO OUR AUSTRALIAN COLLEAGUES SHOULD BE FORWARDED TO ME FOR INCLUSION IN OUR QUARTERLY CONTRIBUTION.

John Tenquist
Editor

CURRENT DEGREE RESEARCH PROJECTS ON ENTOMOLOGICAL TOPICS AT N.Z. UNIVERSITIES : 1983

This list of topics is intended to provide communication between people with similar interests and a source of reference to unpublished theses in University Libraries. Note that Ph.D. and Masters theses are available from University Libraries, but Honours projects are loaned only through the courtesy of the Department or individuals concerned.

UNIVERSITY OF AUCKLAND : Zoology Department

M.Sc.:	de Betham Anderson, L.	A population genetical study of the New Zealand grasshopper *Phaulacridium marginale*.
	Michaux, B.	Biological control of *Cirsium vulgare* (Savi) Ten. and *Cirsium arvense* (L.) Scop. (Compositae: Cynareae).
	Spencer, H.G.	The reinforcement model of speciation: An experimental approach using *Drosophila* species and a computer simulation.

UNIVERSITY OF WAIKATO : Department of Biological Sciences

M.Sc.:	Summerhays, P.	Coexistence in one catchment of seven species of *Zephlebia* larvae (Ephemeroptera, Leptophlebiidae).
	Edwards, R.J.	Biological studies on *Archichauliodes* in Waihi district streams (Megaloptera).
	Edwards, J.M.	Studies on the bdellid mite *Bdellodes lapidaria*, a predator of the lucerne flea.
	Oxenham, H.	The chironomid fauna of the Waitomo Caves area (Diptera, Chironomidae).
	Kirman, M.	Systematic studies on leaf litter Aradidae (Hemiptera, Aradidae).
D. Phil.:	Boubée, J.A.T.	Past and present chironomid communities of Lake Maratoto (Diptera, Chironomidae).
	Boothroyd, I.K.G.	Studies on stream chironomids in the Waikato region (Diptera, Chironomidae).
	Dentener, P.	Ecology and economic importance of the lucerne flea (*Sminthurus viridis*) in the South Auckland/Waikato region (Collembola).

D. Phil. (cont.):

	Gerard, P.	Population ecology of Scolypopa australis (Hemiptera, Ricaniidae).

MASSEY UNIVERSITY : Department of Botany and Zoology

M.Sc.:	Gill, G.	Aspects of the population dynamics of the blue green lucern aphid Acyrthosiphon kondoi.
	Pilkington, S.	Aspects of behaviour and biology of the Argentine stem weevil Listronotus bonariensis relevant to host plant selection and utilization.
Ph.D.:	Dymock, J.	Ecology and physiology of the ragwort seed fly Pegohylemyia jacobaeae (Diptera:Anthophoridae) and cinnibar moth Tyria jacobaeae (Lepidoptera: Arctiidae).
	McGregor, P.	Population dynamics of the eucalyptus tortoise beetle Paropsis charybdis (Coleoptera: Chrysomelidae).

MASSEY UNIVERSITY : Department of Horticulture & Plant Health

M.Sc.:	Khan, I.	The effect of Sitophylus oryzae on germination and seedling quality of maize.
	Stephensons, C.	A study of competition between Sitophilus oryzae and S. granarius in wheat and rice seed.
Ph.D.:	Manley, J.E.	Factors determining host plant suitability for the greenhouse whitefly.

VICTORIA UNIVERSITY : Biochemistry Department

B.Sc. (Hons):	Debnam, P.	Ligand bonding to glutathione S-transferase from Galleria mellonella.
	Sinclair, M.	Possible role of glutathione S-transferases in insecticide resistance of housefly.
M.Sc.:	Moore, C.	Aromatic acid conjugating enzymes from Periplaneta americana.

VICTORIA UNIVERSITY : Zoology Department

B.Sc. (Hons):	Cameron, D.J.	B-chromosomes in the grasshopper Phaulacridium marginale.
	Gubbins, J.K.	Genetic influence on geotactic behaviour in Drosophila melanogaster.
M.Sc.:	Bateman, K.L.	Food and feeding of the german wasp (Vespula germanica Fabr.) (Hymenoptera: Vespidae).
	Chisholm, W.P.	Aspects of the biology of Ichthybotus hudsoni (McLachlan) (Ephemeroptera: Ephemeridae).
	Dasent, H.	A study of a cross-over suppressor in a triple mutant stock of Drosophila melanogaster.
	Gordine, R.S.	Life cycle phenomena of Hemicordulia australiae and Aeshna brevistyla.
	Lane, D.H.	An evaluation of hybridization in zones of overlap between species of cicadas of the genus Kikihia (Fleming), (Hemiptera: Tibicinidae).
	MacArthur, G.J.	Electrophoretic studies on the Porina Moth (Wiseana spp.).
	Notman, P.R.	An invertebrate survey of some Pelorus Sound islands with reference to their predator status.
Ph.D.:	Grehan, J.R.	Studies on the ecology of Aenetus virescens (Puriri Moth).
	Guzman, R.	Factors influencing the effectiveness of some entomophagous nematodes as biological control agents of insect pests.
	Henderson, I.M.	Numerical taxonomy of some New Zealand Trichoptera.
	McIntyre, M.E.	Ecological and behavioural relationships of some native cockroaches (Dictyoptera: Blattidae).

UNIVERSITY OF CANTERBURY : Zoology Department

B.Sc. (Hons):	Butts, C.	General biology of Snares Island wetas.

UNIVERSITY OF CANTERBURY (Cont.)

B.Sc. (Hons):	Clayton-Jones, P.	Web function and feeding behaviour in social spiders.
	Franklin, C.	Effect of katipo venom on nervous systems.
	Jarman, E.	Behavioural ecology of New Zealand aranaeophagic spiders.
	Carey, P.	Habitat selection of salticid spiders living in N.Z. flax.
	McLeod, S.	Predatory strategies of water beetles (Dytiscidae).
Ph.D.:	Zervos, S.	Nematode Gut Parasites of N.Z. Native Cockroaches.
	Hallas, S.	Comparative study of the life histories of web-building jumping spiders (Araneae, Salticidae).
	Rowe, R.	Predatory behaviour with specific respect to prey selection and territoriality in a larval dragonfly, Xanthocnemis zealandica.
	Iris, F.	Synthesis of collaterial proteins in a cockroach, Periplaneta americana.
	O'Brien, B.	The control of mandibular movements in Hemideina maori.

LINCOLN COLLEGE: Department of Entomology

B. Hort.Sc. (Hons):	Dickens, H.L.	Sublethal effects of pyrethroid insecticides on spider mites.
	George, R.	Phytotoxicity of selected insecticides to crop seedlings.
M.Hort.Sc.	Teulon, D.A.J.	Aspects of the biology and management of Typhlocyba froggatti Baker in New Zealand.
M.Appl.Sc.	Siddique, A.B.	The biology and predation of Nabis kinbergii Reuter (Hemiptera:Nabidae).
M.Sc.(Res. Mgt.):	Hide, R.	Socioeconomic analysis of insecticide resistance in apple pests.
Ph.D.:	Butcher, M.R.	Integrated control of Tetranychus urticae in strawberry crops.

LINCOLN COLLEGE (Cont.):

Ph.D.:	Frampton E.R.	The aestivatory and reproductive behaviour of Sitona discoideus Gylleahal (Coleoptera:Curculionidae) and its patterns of infestation of lucerne.
	Hancox, N.G.	Biological control of St. John's Wort (Hypericum perforatum L.) in New Zealand: an evaluation.
	Leathwick, D.M.	The applied ecology of the brown lacewing (Micromus tasmaniae Walker) (Neuroptera: Hemerobiidae).
	Suckling,D.M.	The responses of Epiphyas postvittana (Walker) and Planotortrix excessana (Walker) (Lepidoptera: Tortricidae) to insecticides.
	Tomkins, A.R.	Development of a pest management system based on Tortricid control in apple orchards in Canterbury, New Zealand.

UNIVERSITY OF OTAGO: Department of Zoology

B.Sc. (Hons):	Reardon, F.	Olfactory learning in honeybees.
	Ogden, S.	Feeding behaviour of mosquito larvae.
	Ryder, G.	Distribution of functional feeding groups of benthic stream animals in relation to stream size.
Postgraduate Diploma in Science:	Scott, D.	Morphology and behaviour of the native bees, Leioproctus metallicus, L. fulvescens (Hymenoptera: Colletidae) and Lasioglossum sordidum (Hymenoptera: Halictidae).
	Teale, S.	Neuroanatomical studies of the brain of the honeybee, Apis mellifera.
Ph.D.:	Bremner, G.	Biology and distribution of weevils of the genus Irenimus in Otago tussock grasslands.
	Irvine, J.	Effects of fluctuating river flows on trout and salmon populations.

Jim Irvine has been working on the effects of fluctuating flows on fish food in rivers, and this category is almost all immature insects.

UNIVERSITY OF OTAGO (Cont.):

Ph.D.:	Patterson, G.	Feeding ecology and distribution of lizards in Otago tussock grasslands.

Geoff Patterson is investigating the feeding ecology and taxonomy of local skinks and the impact of predation by skinks on the invertebrates in native tussock grasslands of the southern Rock and Pillar Range.

UNIVERSITY OF OTAGO : Biochemistry Department

B.Sc. (Hons):	Pemberton, P.A.	The isolation and characterization of toxic fragment(s) from Bacillus thuringiensis var Israelensis.
	Ward, V.	Biochemical aspects of the delta endotoxin of Bacillus thuringiensis var. Israelensis.
Dip.Sci.:	de Anderson, J.L.B.	The biology and pathology of a new mosquito irridescent virus from N.Z.
M.Sc.:	Gardner, J.	The biology and field application of the N.Z. strain of the mosquito pathogenic fungus Tolypocladium cylindrosporum.
Ph.D.:	Chilcott, C.N.	The crystal toxins of Bacillus thuringiensis var. Israelensis and its field application against the simuliids in N.Z.
	Archibald, R.A.	An electron microscope study of some insect parasitic protozoa of New Zealand.
	Tenci, S.	The enzootic control of Aedes australis by Coelomomyces opifexi.

List compiled by Dr G.W. Gibbs, Zoology Department, Victoria University.

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ROYAL SOCIETY MEMBER BODIES REPRESENTATIVE'S REPORT

The Royal Society committee meeting of April 27th recorded 55 affiliated member bodies.

ELECTION OF OFFICERS

Because many elections are for a three year period the number necessary this year has been reduced but those elected were:

Member bodies' representative on Council	Dr D E Wright Dr D W Featherston
Management Committee Representatives	Dr A C G Heath Dr H J Percival Prof R D Batt
Vice Chairman (who is also NZ representative on ANZAAS Council until 1984)	Prof N F Curtis

ANZAAS

Although finance is a problem there are tentative plans to hold a congress in 1987 in the Wellington province.

THE PRINCE AND PRINCESS OF WALES SCIENCE AWARD SCHEME

Last year members of the Entomological Society were asked by questionnaire for their views on this scheme. Those who replied were strongly in favour, both of the scheme and on average, the $2 levy. Having taken part in a number of discussions on questions on multiple membership and methods of contribution etc, I would like to make the following suggestions:

1. That our secretary be asked to append to the annual subscription form, as a separate item, a purely voluntary levy of $2, applicable particularly to professional scientists and technicians who are the potential benefactors. In this way it is a tax deductable as a work related expense, receipted together with the subscription.

2. That in cases where members belong to more than one member body it be left to them to choose the one they wish to contribute through. It would be helpful if they made all contributions though one society.

3. That on receipt of the donations, the Secretary makes one annual payment to the Royal Society.

Professor R J Ferrier's notes on the scheme are appended.

R G Ordish
May, 1983

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THE PRINCE AND PRINCESS OF WALES SCIENCE AWARDS SCHEME

Purposes

The Prince and Princess of Wales Sciences Awards are to be offered by the Royal Society of NZ as prestige awards with the

objective of advancing New Zealand science. The Council of RSNZ has stated the objectives as follows:

> It is envisaged that most awards will be made to New Zealand based scientists, technologists and technicians to enable them to travel to carry out studies relevant to New Zealand science, to learn techniques or develop expertise, to use equipment, collections or library facilities not available here, to gain in-service training, or to promote New Zealand developments. Such awards will normally be for visits not exceeding two months and may be made for travel and subsistence purposes. Assistance may also be given to scientists or technicians within or outside New Zealand to help them carry our work of national importance in this country or to share their expertise with New Zealand colleagues.

It is forseeable that individuals or institutions which provide funding for the scheme may wish to specify the terms of their donations and, therefore, at this stage, Council does not choose to define more precisely the conditions which will pertain to all awards.

it is intended that the main purpose will be to promote overseas travel by practising New Zealand scientists and technicians, but applications for awards which will permit scientists to travel to this country to share their expertise will be welcome. In such cases, proposals should be submitted by New Zealand collaborators. Applications for Awards to assist suitable research within New Zealand will also be considered. Applications relating to attendance at conferences will receive low priority, as will requests for support for travel for general post-graduate experience or Ph.D study. Awards will not generally be made for the purchase of equipment or materials. A proportion of available Awards will be used to promote UK - NZ contacts as the RSNZ's response to the Australian Fellowships recently initiated by the Royal Society (London).

Eligibility

The scheme is intended to advance New Zealand science in general. There will be no restriction on applications based on age, formal qualifications or field of science, but successful applicants will have shown excellence in their chosen field. Scientific endeavour of clear benefit to this country will be favoured, as will practising scientists rather than administrators.

Selection of Recipients

Awards will be made by RSNZ Council on the recommendation of committees comprising scientists deemed best qualified for the purpose; it is anticipated that Member Bodies will be strongly represented in these groups.

Terms of Awards

> Awards for travel from New Zealand will normally be for visits not exceeding two months, and may be for travel and subsistence purposes. It is therefore envisaged that an upper limit of ca. $8000 per grant will apply and that about 10-15 grants

will be made per year. For visits by overseas scientists to New Zealand, the same maximum level of support will apply. Funding for the scheme is unlikely to permit support for standard post doctoral work.

Timing of Awards

Advertisments of the first awards will appear in June 1983 and subsequently in February and June each year.

Finance

1) Government has agreed to provide $25,000 p.a.

2) Mr L W Gandar and a committee comprising Mr R A Broughton Managing Director, Shell Oil NZ Ltd, Mr P R Demaine, Chairman and Managing Director, ICI NZ Ltd., Mr P L B Goodman, Chairman of Directors, Goodman Group Ltd., Mr J Mowbray Chairman, Development Finance Corporation, Dr N de B Hornibrook, Dr G A M King and Dr I A M Prior, RSNZ representatives, are administering an appeal to science-based industry to support the scheme.

3) Member bodies are being asked to provide financial assistance and a separate paper is available outlining the methods of payment from which individual Member Bodies may select should they agree to assist.

Administration

Council of RSNZ has appointed the following Committee to administer the Scheme: Honorary Treasurer (convenor), Professor N F Curtis, Dr N de B Hornibrook and Dr D E Wright.

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EDITOR'S REPORT 1983

After an initial apparent shortage of papers for the *New Zealand Entomologist*, a flood was received, meaning that again some papers have had to be held over for an issue. There have been delays in printing caused by a combination of factors: my time was restricted while the first issues of the *Fauna of New Zealand* were prepared; delays at the printer; and the index to volume 7 had to be prepared. For the first time over 100 people contributed to a volume of the *NZ Entomologist*.

Starting with Volume 8, each issue per year will be a volume. This should help librarians and abstracting services.

Three bulletins appeared: Bulletin 6 *Insect Photography* by Bruce Given, Bulletin 7 *Guide to NZ Entomology* by Graeme Ramsay and Pritam Singh in July and Bulletin 8 *Drawings of NZ Insects* by Desmond Helmore in December.

In addition a poster for the Society (Education sub-committee) has been sent for printing; deliveries of this are now available. A poster on the ecology of the Waitomo caves featuring the glowworms is being planned. The Todd Foundation have just awarded the Society a grant of $500 to assist in its preparation.

Once again, I thank all those who have contributed papers or acting as referees.

T K Crosby, Editor

BIBLIOGRAPHY REPORT 1983

We anticipate that the bibliography project will contain all references up to the end of 1982 by September this year. In the meantime, it continues to operate on a trial basis using an old version of the database containing 8500 references. It has not veen practical to update this database until decisions about information retrieval programs available on DSIR computers have been resolved.

Virtually all the existing prepared files of references have now been proof read and checked for bibliographic accuracy. We were fortunate to have Miss Ann Marshall for 6 months in 1982 to carry out this exacting task, which she did very well. We suffered a serious setback to our plans for completion when the Student Community Service scheme was withdrawn last summer, but progress has resumed with the employment of 6 people through the PEP scheme.

We have also been fortunate in being awarded a Golden Kiwi Lottery grant of $3000 with which to finance the preparation of theses and honours projects for the bibliography. Miss Jocelyn Neutze, a 5th year medical student from Auckland with 3 years experience on the bibliography, is presently doing these for the South Island universities.

All in all we consider the situation to be very satisfactory, and we are looking forward to the system being fully operational in the near future.

G W Ramsay, T K Crosby and C H Wearing.

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REPORT OF THE OTAGO SECTION OF THE SOCIETY 1982-1983

The highlight of this years activities was the involvement of our section in the 15th Pacific Science Concress held in Dunedin during 1-11 February 1983. The Committee were extremely grateful to the many members who gave up long hours to help man the sales desk, which was far more sucessful than anticipated, and which provided funds to entertain local and overseas entomologists at a wine and cheese social evening in the Otago Museum. The function was largely sponsored by local industry who were most generous in providing food and liquid refreshment either free of charge or at a very generous rate. The section would like to thank Graeme Ramsay for helping to organise sponsorship for the social function. We are also very grateful to Entomology Div. for providing colour prints from slides so that we were able to put on a magnificent display of photographs of insects of Swampy Summit which were on view in the Otago Museum during the period of the conference. The photographs were much admired, rather more than Swampy Summit itself on the day of the field trip. Dunedin weather excelled itself by putting on galeforce winds from the south with flurries of snow and ail! Brave souls who ventured out of the coach were easily convinced they were in the sub-alpine zone at 700 metres!

The weather managed to disrupt our plans to take a party up to the Rock and Pillar Range in November, but we did enjoy a very pleasant weekend with Nigel Simpson, the Lands and Survey Ranger at Queenstown, who took us up into the Remarkables near the Rastus

Burn catchment. We were once again privileged with a series of excellent speakers who 'pulled in the crowds' to our monthly evening sessions. These included John Dugdale, who gave a most enlightening talk on his time at the BM (Nat.Hist.) Graeme Bremner gave a fascinating account of the first of the Fiordland expeditions to study the effect of rats on the insect fauna of the islands. Since then the second party, which I was privileged to join, has returned having enjoyed a most memorable and exciting trip.

Lyn Forster of the Otago Museum gave an extremely interesting talk on her work on the visual acuity of salticids which was enhanced by a live demonstration of some exceptionally well behaved spiders who did exactly what they were supposed to do. (unlike most live displays!) The talk which really brought in the masses (predictable, I suppose) was entitled 'A trouts eye view of entomology' by Dave Witherow, Fisherman, Zoologist and member of the Natural History Film Unit. Our message to other sections is if your attendance rates are falling, invite an angler to speak. They are very knowledgeable about insects and the meeting will be swamped with fly fishermen and you can get a few new members.

Recently we invited Assoc. Prof. Carolyn Burns, Chairman of the Nature Conservation Council to talk on conservation and we were treated to a most articulate and informative update on recent developments in this sphere. We all came away very contented to feel that conservation interests in NZ are in very capable hands with such people as Carolyn Burns representing them.

I would like to take this opportunity of formally thanking the committee of the Otago Section for their support this year and for that of many other members who gave so much help when it was needed.

B I P Barratt
Chairman

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REPORT OF THE CONSERVATION SUB-COMMITTEE 1982-1983

1) Following the meeting of the committee on 17-19 May 1982, a letter was sent to the Secretary of the Outlying Islands Advisory Committee of the Dept. of Lands and Survey expressing our concern that invertebrate specialists have not been represented on this committee in the past and that such a representative might be considered in the future. The reply stated that the Minister for Lands has considered this proposal and decided against making any change to the present composition of the committee on the grounds that not all scientific disciplines can be represented and that advice from Entomology Division is always sought when necessary.

2) Our existence and concerns were brought to the attention of the Wildlife Service in the light of their current plans to revise the Wildlife act. We asked that Entomology Division might be consulted during the early stages of the preparation of any amendment bills. A positive reply was received from the Director, who assured the Society that the 'protection of insect species and habitats' is of great concern to the Wildlife Service and that the inclusion of endangered species in the Wildlife Act can lead to direct action being taken to preserve them. We were

also assured that any alteration to the present schedule of protected arthropods would be brought to the attention of the Entomology Division and the Entomological Society.

Submissions

1) Comments on the Rock and Pillar Range Pastoral Lands Assessment report prepared by the Department of Lands and Survey were submitted. The Rock and Pillar Range was one of three areas selected for trial assessment study to test criteria and procedures for the identification of pastoral leasehold land which should remain in public ownership with the potential for reserve or 'multiple use land' status.

2) A submission was sent to the Department of Land and Survey on the Catlins Coast Park Concept, in which full support of the Society was given to the concept.

3) A short submission was sent to the Department of Lands and Survey on the 'Criteria for the Identification of National Reserves'.

4) A submission was prepared on the Ruakumara State Forest Draft Management plan forwarded to the Forest Service.

5) Comments of the Auckland Islands Management plan were submitted to the Department of Lands and Survey.

6) Following discussions with Alan Mark of Otago University, a letter was sent, on behalf of the Society, to the Commissioner for Crown Lands supporting the case for an extension to the Nardoo Reserve on the East Otago Plateau. It was argued that the lower 400 hectares of the Nardoo catchment be incorporated into the already existing Nardoo Scientific Reserve to provide tussock grassland reserve which is still in its native state which extends over a wide altitude range. The Lower area which reaches down to Lake Mahinerangi at about 450 m is particularly unique in its relatively unmodified state. Unfortunately the Otago National Park and Reserves Board finally voted against this addition to the reserve. Copies of all documents and submissions were available at the May 1983 conference for further information and consultation. I would like to take this opportunity of thanking all the members of the committee for their help and support during the year.

Barbara Barratt
Convenor.

oOo

Mariarita Rizzo, Via Filisto, 142, 96100 Siracusa, Italy, is the manageress of a firm dealing with insects. She would particularly like specimens from NZ and is willing to exchange. Interested members can write to her direct.

Advertising poster

At time of writing this was very close to completion and Des Helmore was putting the finishing touches to Alison Caulton's drawing and adding an identification guide. Quotes for printing ranged from $1200 for 500 copies to $2000 for 4000 copies. It has been suggested that a number be made available to branches for their own advertising purposes free of charge(number to be decided) and charges to be made for any over this yet to be specified number. Five hundred of a first printing of 4000 have been made into 18 month calendars, starting from July 1983. Thanks are due to all the DSIR Auckland people and particularly Trevor Crosby who nursed this project along.

Butterfly cards

It is worth noting that a small amount of scientific input (generic and specific names: authorities etc) on the cards makes them educational items which may be a way of foxing the IRD.

Teaching sets

The Entomological Society of America has a series of entomology teaching sets (modules) utilising transparencies, cassette tapes and a script of a taped narration, together with study questions and answers, Prices range up to $US500+ and the modules, although elementary, would be good for students. We could perhaps attempt something similar ourselves to deal with specific insects.

Research topics list

This is still in preparation and requires a few more weeks of regular effort to finish.

Australian link

Contact with our Australian counterpart could be seen as an educational move for both societies and I suggest that we have a correspondent who can forward suitable material (notices of conferences, lists of publications, potential visitors to Australia) to be placed in the Australian Entomological Society's news bulletin.

Communication between biologists

This topic has taken up a large portion of my time since the last AGM but is seen as an important educational process.
A number of meetings have taken place since 1981 between the RSNZ and representatives of some biological societies to discuss both the need for better communication between biologists and a national body that could represent biologists. A subcommittee convened by myself and with Ron Ordish and 5 other Wellington-based biologists, attempted to formulate some ways and means of achieving these aims.

A number of solutions including the establishment of an Institute of Biology or the better use of existing bodies such as the RSNZ or NZ Association of Scientists, were discarded for a number of reasons, including cost, complexity, presumed lack of support and

general unwillingness to jump in at the deep end. Finally it was decided to make an attempt at a Federation of Biological Societies, a loose agglomeration of biologists among whom lines of communication could be established by means of a quarterly newsletter. This document would consist of items culled from newsletters of the contributing societies, would contain notices of conferences, meetings etc and be compiled by a steering committee comprised of the original members of the investigating committee.

To date there has been almost unqualified support for the idea and if the newsletter prospers it is hoped that it will be possible to establish an 'expertise' list on which the RSNZ can draw to answer quickly questions posed by MP's etc. In addition the Federation can be a clearing house for problems facing biologists and a means perhaps by which biology teaching can be improved or modified by making submissions through regional syllabus coordinators. The steering committee hopes it can slide out from under after a year or two and hand over control to, say, individual societies to run for a year or for an elected group to do the same.

We have had wholehearted moral and material support from the RSNZ who will provide secretarial and mailing services at a low cost.

A C G Heath
Convenor.

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THE WETA

Three issues of the new look 'Weta' have now been published, and members will no doubt agree that the new format with a card cover is a big improvement on the earlier editions.

Copy is coming in at a steady rate and the Editor no longer finds it necessary to canvass members for contributions - this was a problem for several years which hopefully, on reading this, will not recur.

Occasionally articles more suited for the 'Entomologist' have been received. In all cases, these have been referred back to the author with the suggestion that the be submitted to the Entomologist.

It should always be remembered that the Weta has a very different function to the Entomologist. The Weta is a forum for members and general interest articles with an entomological bias. Letters to the Editor are always welcome.

J D Tenquist
Editor

THE WETA, 1983 6(2) 50-57

OBSERVATIONS OF *Gonorhopterus spinicollis* (Broun,1904)

Blair Arthur

PO Box 272 Taihape

A Note

On 5 May 1982, I collected an adult *Gonorhopterus spinicollis* at Bennetts Siding, Taihape,after having beaten it from a leaf of *Pseudowintera colorata*.

On 31 October, 1982, I was watching this weevil walking around its cage. It was moving around freely at a fast pace and venturing, quite frequently, onto pieces of *P.colorata* which had been in the cage for almost a day. It then went up to the top of one of the twigs where it proceeded to lift each leg, one by one, as if bracing itself. Each leg was lifted off the leaf twice. After staying absolutely motionless for about 30 seconds in this position it suddenly shook the leaf by moving its legs up and down, its body staying still. Immediately afterwards, it spread its elytra and flew onto the glass front of the cage, proceeding as before, to move quickly around. This leaf shaking and flying was repeated twice, later in the day.

On 8 November, 1982 at 6.30 am, *G spinicollis* was on a lichen covered dead branch standing very still. This branch had a diameterof about 2 mm. Its legs went only part way around the branch. I decided to spray some water into the cage and having done this, observed the weevil.

Just after I sprayed the cage, the weevil started making jerky movements from side to side for about 10 seconds pausing between the sixth and ninth seconds - I stopped spraying between the sixth and 8th seconds and as some of the water probably landed on the weevil, it is possible that the spraying triggered these movements.

At 4.50 pm that day, the weevil was off the branch and near the front of the cage on a leaf, once again quite still.

THE WETA, 1983 6(2) 58

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SILKMOTHS AT AUCKLAND - AN UPDATE

Ruud Kleinpaste

Auckland

During the weekend 23-25 April 1983, six adults of the previously unidentified hairy silkmoth caterpillars emerged from their pupae at the PHDS laboratory, Mt Albert. Another specimen emerged on 28 April. The species has now been identified as *Dictyoploca simla* (Lepidoptera:Saturniidae), A native of North India and Pakistan.

The large green caterpillars were found on 9 December 1982 on a *Betula sp* tree in Howick and pupated a few days later. The 'open mesh' cocoon through which the pupa can easily be seen, is spun among the leaves and twigs of the food plant. The adult of *D simla* resembles the gum emperor moth (*Antheraea eucalypti*) somewhat, but can be distinguished by the distinct pinkish colour of the discal region of the hindwing and the light coloured V-shaped area on the forewing which contrasts with the dark brown outer half of the forewing. The wingspan varies from 120-150 mm

D. simla adults fly in autumn and the eggs are laid in rows on the twigs of the host plant where they overwinter. The caterpillars hatch in spring and feed on a wide variety of Dicotyledonous trees - *Aesculus, Juglans, Pyrus, Malus, Prunus, Salix, Betula and Lagerstroemia* have been recorded as hosts. Reference to *D. simla* in the literature are scarce and the species has never been recorded as a serious pest. As could be expected, this silkmoth is rather popular among amateur moth rearers and features in overseas livestock catalogues.

No further sightings of the other new silkmoth species in Auckland have been recorded since our last summary.

THE WETA, 1983 6(2)58

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SILK MOTHS IN NZ

Olwyn Green

Mt. Albert Research Centre
Private Bag
AUCKLAND

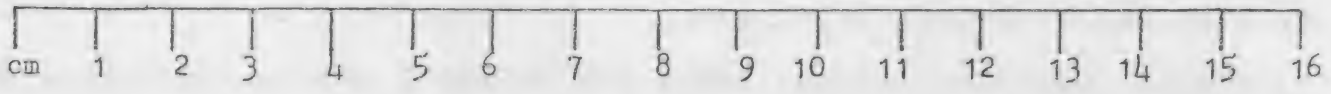
a. Hyalophora cecropia: cecropia silk moth. North America. Wingspan 14-16 cm.
Hostplants: Over 50 species, including apple, ash, cherry, elm, hawthorn, lime, maple, plum, poplar, silver birch, willow.
First found in N.Z. as a caterpillar feeding on apple leaves in a Panmure garden, autumn 1982. Adults have subsequently been recorded from Pakuranga, Panmure, Howick, Bucklands Beach, Ellerslie, Grey Lynn and Maraetai (male). MAF Field Officers have surveyed all areas where cecropia moths had been found during the summer. On one property in Mt. Wellington, two last instar larvae, some infertile eggs and a fresh cocoon were found. In Panmure one old cocoon was found.

b. Samia cynthia: Ailanthus silk moth. North America. Wingspan 9-14 cm.
Hostplants: primary host is Ailanthus altissima (Chinese tree of heaven). Minor hosts include ash, cherry, lilac, liquidambar, pear, plum, privet, sycamore, tulip tree, walnut.
Adults were first found at Albert Park (Auckland central city) at the beginning of November 1982. A search of the lower branches of the 15 m high Ailanthus trees in Bowen Avenue turned up 21 cocoons, some of which produced moths straight away. Adults were also found at Pakuranga and Howick. Eggs and young larvae were found on Ailanthus trees at Pakuranga College on 7 December 1982 and reared to the pupal stage on 5 January 1983.

c. Antheraea sp. pernyi? Oak silk moth. South China. Wingspan 10-12.5 cm.
Hostplants: hawthorn, oak.
Empty cocoons of this species were found at Pakuranga College on 3 December 1982 and three small caterpillars, found on leaves of oak on 2 December were reared. One caterpillar survived and pupated mid January 1983. The identity of this Antheraea species can only be confirmed when the adult emerges.

d. Dictyoploca simla: N. India, Pakistan. Wingspan 10-15 cm.
Hostplants: cherry, silver birch.
Last instar larvae were found feeding on silver birch at Howick on 9 December 1982. They pupated very soon afterwards and moths began to emerge at Anzac weekend, 1983. This species differs from the others in that it overwinters as eggs instead of pupae.

e. Actias selene: Indian moon moth. India. Wingspan 12-16 cm.
Hostplants: hawthorn, holm oak, plum, rhododendron.
A single adult specimen was found flying in a shopping area in Panmure on 31 March 1980, and handed to K.A.J. Wise at the Auckland Institute and War Memorial Museum.



The cecropia moth is a possible pest species in NZ in the absence of its natural enemies, with the caterpillar eating large quantities of leaves of about 50 species of deciduous trees. Horticulture shelter belts and conservation plantings of willows and poplars are the most threatened, as normal spray routines should control the moth in other horticulture tree crops. Other species may not be a major problem, but the apparently deliberate introductions are causing concern.

After the first cecropia moth was sent to MAF for identification it was given newspaper and television publicity. Leaflets describing the differences between this species and the well established gum emperor moth were distributed to householders in the neighbourhood. Field Officers from the MAF made a thorough search of host plants in the area where the original find was made and subsequent reportings. Public response and further surveys produced 5 new species in Auckland.

Sightings were localised and numbers small so far. Four hectares of land around Pakuranga College and nearby park were sprayed by helicopter with a synthetic pyrethroid (deltamethrin) on 15 December1982, organised by the Forest Service and MAF. Other sites where larvae or eggs had been found were sprayed by hand. Another survey was to take place in July when it should be easier to locate pupae on deciduous hosts.

THE WETA, 1983 6(2) 59

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OBITUARY

Dr Bazil Elwood Montgomery, 83 of Purdue University Florida died recently in hospital. Dr Montgomery gained international recognition as an authority on bees and dragonflies. Under the auspices of a Fulbright Grant in 1949-50, he specialized in research on bumblebees and pollination as it affected cloverseed production in New Zealand.

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A FURTHER RECORD OF THE SOUTH AFRICAN DUNG BEETLE *Epirinus aeneus* (Scarabaeidae)

R.M. EMBERSON

DEPT OF ENTOMOLOGY, LINCOLN COLLEGE

Emberson & Matthews (1973) reported the presence of the South African coprine scarab *Epirinus aeneus* Wiedemann on the basis of two specimens collected at Waimari Beach north of Christchurch in 1969 and 1971. In spite of sporadic efforts at collecting the species over the intervening years no further specimens have been found from this locality and the long term establishment of the species remained in doubt. Recently a third specimen collected at Waimakariri Lagoon in October 1982 has been seen. This is a minimum of 6 km north of the previous known locality. The specimen bears the data "on top of sand" which while not very precise, does suggest, combined with the locality of the previous specimens, that the species may be restricted to coastal sand dunes. Its habits in the Cape Province of South Africa do not seem to have been recorded.

The new locality and the spread of dates over thirteen years indicate that *E. aeneus* is permanently established in New Zealand although still apparently restricted to a fairly small area and probably not very numerous. Its establishment seems to parallel that of the artificially introduced *Copris incertus* which was unknown for nearly twenty years following its release near Whangarei in 1956.

REFERENCE

EMBERSON, R.M. & MATTHEWS, E.G. 1973. Introduced Scarabaeinae (=Coprinae) (Coleoptera) in New Zealand. New Zealand Entomologist 5: 346-350.

THE WETA 1983 6(2)61

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NEW GENERIC NAMES FOR RHYSODIDAE (COLEOPTERA): A NOTE

J. Charles Watt,
Entomology Division, DSIR, Private Bag, Auckland

A key to New Zealand Rhysodidae was printed in *The Weta* 3 (3): 31-32. This included the following typing errors:

page 31, line 10: monoiliform should read moniliform.
line 46: 1975 should read 1875, 1980 should read 1880.

The names of two endemic New Zealand genera are preoccupied, and should be changed as follows:

Tangarona Bell and Bell, 1982 replaces *Tangaroa* Bell and Bell, 1978, not Lehtinnen, 1967 (Araneae: Uloboridae). The type species and only member of the genus is *Tangarona pensus* (Broun, 1880).

Kupeus Bell and Bell, 1982 replaces *Kupea* Bell and Bell, 1978 not Philpott, 1930 (Lepidoptera: Pyralidae). The type species and only member of the genus is *Kupeus arcuatus* (Chevrolat, 1873).

REFERENCES

Bell, R.T. and Bell, J.R. 1978. Rhysodini of the world. Part I. A new classification of the tribe, and a synopsis of *Omoglymmius* subgenus *Nitiglymmius*, new subgenus (Coleoptera: Carabidae or Rhysodidae). *Quaestiones Entomologicae 14*: 43-88.

_____, 1982. Rhysodini of the world. Part III. Revision of *Omoglymmius* Ganglbauer (Coleoptera: Carabidae or Rhysodidae) and substitutions for preoccupied generic names. *Quaestiones Entomologicae 18*: 127-259.

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21st ANNIVERSARY RESEARCH GRANTS
1983 AWARDS

Mr D Russell

$150 for assistance to continue the Auckland Branch's study of bumble bees.

Mr A Savill

$500 for a study of New Caledonian Tiger beetles. For travel and collection costs within New Caledonia.

Miss A Walker, Dr C Butcher, Dr M Hill

$300 These funds are to be used to employ a student to sort samples in a study of beech scale on black beech.

Mr L de Betham Anderson

$475 for help with the expense of travel and equipment for a population genetical study of the NZ grasshopper.

Ms J Smith for "Save our Snails" Society.

$250 to help implement measures for the conservation of *Placostylus ambagiosus*, an extremely rare native snail. Habitat conservation of this kind is of benefit to entomology as well as to other invertebrate groups.

RESEARCH PROJECTS COMPLETED DURING 1982 -1983

Mr W J Winstanley

As a result of the completion of Mr Winstanley's 1981 No.2 grant, a paper has been completed: "Observations on the Petaluridae (Odonata)" *Advances in Odonatology* 1:303-8 (1982)
A further paper has been completed from the work done under Mr Winstanley's 1981 No.1 grant "*Caledopteryx maculata* spec. nov. from New Caledonia. (Zygoptera Megapodagrionidae)" *Odontologica* 11 (4) 339-46 (1982).

Dr V B Meyer-Rochow

Male adult glowworms were air-freighted from NZ to Japan. Light studies on their responses to various types of light showed that they are sensitive to green light and UV light like most invertebrates, but are also sensitive to blue light of the type they emit themselves.

Auckland Branch

A report on the second trip to Great Barrier Island for work on an insect survey was received. An account appears in "*The Weta*" 5 (2) (1982) This grant was originally awarded in 1978.

RESEARCH PROJECTS STILL CONTINUING

Mr M McLea has only managed to collect blackflies within the North Island so far, but hopes to use the remaining half of his grant for collection costs in the South Island as soon as possible. He has collected from Hawkes Bay, Wairarapa, Wellington, Manawatu, Central North Island areas, Bay of Plenty and New Plymouth. One paper is ready for publication and more are planned.

Mr D R Gibbs

This work on the possible territorial behaviour shown by wandering spiders is still continuing. Some trouble was experienced with the equipment at first. A grid of pitfall traps has been laid down, and exploratory trapping has begun.

Mr I McLellan

Three areas of the North Island have been visited for collecting Plecoptera - Northland, Egmont and Wellington. The results of this and previous collecting work are being written up at present.

Mr D Russell (for the Auckland Branch)

The work on Bumble bees is to continue with à further grant to construct more nesting boxes this year. Nesting boxes were made last year and considerable information was gathered then.

Susan Millar
Secretary.

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CORRESPONDENCE

Watch for Chiggers!

"Chiggers" is the name applied to mites of the family Trombiculidae. Adult and nymphal forms are free living while their larvae are ectoparasitic on a wide range of hosts: Mammals, birds, reptiles, amphibians and insects. In New Zealand very few species have been found, probably because of their particular life cycle, or perhaps because they have not been looked for properly. In a recent publication, Loomis & Goff (*J. Med. Entomol.* 20 (1):87-89 1983) described a new species from 5 chiggers found on a North Island Brown Kiwi from Taranaki. This new species belongs to a genus *Guntheria* which has never been recorded in New Zealand, and is the first chigger ever found on a kiwi, despite the high number of these birds searched for ectoparasites in the last few years. According to the literature, chiggers can be found mainly under the wings, on the thighs and anal region of birds.

While we want to draw the attention of the reader to these little "greeblies", we would like to make an appeal to those animal lovers who are likely to handle live or dead birds (and mammals, reptiles, etc.) to keep an eye open for chiggers. The ectoparasitic larvae are orange-yellow to light-red, very small (around 0.5mm), round shaped, hairy and have 6 legs.

The free living nymphs and adults are bigger, usually pink or red and have 8 legs and have a marked constriction in their bodies. They can be found associated with plants, leaf litter and nests.

Techniques for collecting parasitic larvae are similar to those used for lice from birds and mammals (see: Heather, B. *O.S.N.Z News* 19:8, 1981). Adults can be found in any leaf litter sample or nest processed through a Berlese funnel. Specimens can be sent in spirit (ethanol or methanol 70%, whisky, etc.) to the National Museum, Private Bag, Wellington, including the relevant collecting data.

Many thanks!

R L Palma
National Museum
Private bag
Wellington

A C G Heath
Wallaceville Animal Research Centre
Private bag
Upper Hutt.

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WELLINGTON BRANCH ACTIVITIES - 1982-83

The Committee elected to look after the activities of the Wellington Branch for 1982 comprises Trevor Ritzema (President) John Grehan (Secretary/Treasurer), Caroline Spackman, Ian Henderson and Kevin Bateman. Branch membership still stands at about 40 - similar to last year. Despite the small membership, Branch activities have been consistently well supported.

The following speakers addressed evening meetings of the group:

Dave Burton (VUW) gave a general account of the life of slugs.

Dave Manson (MAF, Levin) presented information on interceptions of exotic arthropods and related aspects of his work.

Bill Chisholm (VUW) talked about his work on the biology of the burrowing mayfly *Ichthybotus hudsoni*.

Niels Kristensen from the Copenhagen Museum discussed aspects of early evolution in the Lepidoptera. This was at a joint meeting arranged with the Biology Section of the Royal Society.

Mike Meads (Ecology Division, DSIR) Shared with us in words and slides, his experiences on the Galapagos Islands and in the Amazon.

Once again, member' accounts of the own summer activities provided an entertaining evening, being livened also by a little wine and more cheese.

The Wellington weather has been true to form and curtailed outside activities. After two attempts, the arrangements for an evening field trip combined with a barbeque was allowed to lapse. Perhaps we will have better luck next year, but the same event was rained off last year as well!

Anon

On the evening of July 13, the Wellington Branch farewelled Cleveland Duval who is moving to Auckland and taking over editorship of the "Fauna of NZ" series. Cleveland alsc gave a very interesting talk on his experiences with the tsetse fly control programme in Africa in 1968. A very much younger bwana Duval stared out at us from one of the transparencies, closely embracing an obviously well earned bottle of beer.

The "Marsupial-like" reproductive biology of the tsetse and their imperviousness to squashing (when unfed) were interesting features of a remarkable insect. This, coupled with pictures of mile after mile of game animal "exclusion" fences, bordered on each side by a buffer strip about a half mile wide, totally denuded of vegetation; together with a wholesale spraying of dieldrin and DDT, was a tale of applied entomology with a vengeance.

As an entree to the talk, John Grehan had devised a fiendishly difficult entomology practical examination, wherein a total of 54 questions was asked about the names, habits and distribution of a number of NZ insects. There was very little honest discussion after the marking, although it was ascertained that the President of the Entomological Society of New Zealand scored 31½. This has been mentioned here in a spirit of fearlessness as an encouragement to others, and as an indication that (fortunately) entomological knowledge does not appear to be a prerequisite for nomination for the presidency. A well known Victoria University entomologist, who shall remain nameless, got at least 3 wrong anyway; tut tut, George!

Revenge will be sought by the president in the form of a quiz on ectoparasitic arthropods to be set sometime in the near future.

Allen Heath

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DUNEDIN SECTION PRESIDENT'S REPORT 1982-3

The Dunedin Section has again enjoyed a busy and eventful year, with our involvement with the Pacific Science Congress constituting one of the main highlights. You will notice the results of some of our endeavours on this years balance sheet, but more important was that everyone involved with the Congress seemed to enjoy and benefit from the experience and opportunity to meet entomologists from overseas. At the risk of repeating myself, I would once again like to heartily thank all those who helped with the smooth running of the sales desk, the wine and cheese evening, the photographic display and the field trip.

Our evening programme of talks has once again provided a wide range of entomological topics. John Dugdale from Entomology Division recounted his recent experiences working at the British Museum on NZ lepidoptera, Carolyn Burns and Ken Taylor representing the Nature Conservation Council and the Department of Lands and Survey respectively gave most enlightening talks on conservation issues. Ruth Lawson of the MAF described how insects contribute to the dispersal of hydatid eggs and Alison Mercer of the Zoology Department talked recently about the techniques used in studying learning and memory in honey bees.

The "summer" season this year was not kind to us and those field trips which did not have to be cancelled were rather chilly affairs. However, some of us enjoyed a very pleasant weekend at Queenstown, where the warmth of Neil Simpson's hospitality helped to make up for the freezing temperatures on the Remarkables.

I would like to take this opportunity of thanking the committee and other members of the society for their help and support during a most enjoyable three year term as President.

Barbara I P Barratt

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THE GERMAN WASP: SUPER PREDATOR!

D.R. Gibbs
19 Beech Crescent
Hamilton

In most non-marine ecosystems insects play a series of important roles depending basically upon what they eat. Herbivorous insects feed on living, green plant material - stick insects; decomposers feed on dead botanical matter, such as fallen dead leaves - cockroaches; carnivores obtain the required proteins, fats and carbohydrates by devouring other insects. One of the more frequently seen carnivorous insects is the praying mantis Orthodera ministralis, which is common both here and in Australia.

The biology of the mantis is not well known, though Sharell (1982) has recorded his observations, and Forster and Forster (1976) diagramatically illustrated the predator status of the praying mantis in manuka (Leptospermum scoparium Forst) community. Hutchin (1972) states that the mantis need not be hungry to kill and devour other insects, but that feeding reactions are triggered by the mere presence of food.
A mantis is capable of overpowering insects of its own size or larger as evidenced by the capture of a Katydid, Caedicia simplex observed at Titirangi, Auckland, in March 1983(G.W. Ramsay, pers. comm.). In this case only the head was devoured.

The mantis does have its own natural enemies, for it is preyed upon by various solitary wasps. Sharell found that a small wasp, probably of the genus Podagrion parasitises the eggs of the mantis by laying its own eggs within the viscid mass of the mantis' egg capsule before it hardens. Hutchin found that in America the adult mantis is the prey of a solitary wasp, Tachytes, which when it locates its prey "...hovers about it, darting at it now and then. In time the mantis tires or perhaps becomes careless. In any case, the wasp eventually darts down

and grabs the mantid's neck-like prothorax with her legs. Then with lightening-like speed, she plunges her sting into the body of the mantis, which at once becomes unconscious. The wasp's next act is that of dragging the body of the mantis into her burrow where it will serve as food for her young."

It is not known whether the adult mantis is predated by solitary wasps in New Zealand. However, it is prey of the German wasp, Vespula germanica.

The German wasp is cosmopolitan in its choice of food, being omnivorous; it shows no preference between either botanical or invertebrate food and will often be seen eating honey dew. Observations by both Gibbs (1980) and Kleinpaste (1980) have added to the list of invertebrate prey taken by this wasp.

In this latest incident, which occurred midday on 20 March 1983, the attack sequence was not observed and whether the wasp initiated the attack on the praying mantis or vice versa is not known. The observation started with the mantis lying prostrate, ventral side up, on the ground. The wasp was standing over the mantis in a head-to-head position, biting through each of the mantis' formidable grasping forelegs in turn at the coxa-femur joint. The dismembered legs were not eaten and at no time did the wasp attempt to sting the mantis. With the legs removed the wasp then severed the head from the thorax at the joint and proceeded to devour it. At this point the wasp was disturbed and took flight carrying with it the remains of the head.

The headless body of the mantis when placed on its legs continued to move and sway in the manner so characteristic of this insect. Such movement was observed for some 15 to 20 minutes prior to the mantis being placed in alcohol for preservation.

The slayer of the formidable mantis must indeed be a 'super' predator.

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FESTIVAL OF THE INSECTS

Dairmid Jennings
The Rock, Pelorus Sound
PB HAVELOCK

A certain peculiar form of communication enabled these creatures to congregate together, at a given moment, in all the time that there ever was! They came from all over these Islands by methods that some acari and diptera have been using for many millennium. They entered the thorax of indescribable monstrosities, and speeding through the upper air, or over the lower land, propelled by a gas or a liquid so old that the first insect had hardly made its first fluttering flight when it was formed, they all arrived at Heretaunga. Some crossed the blowhole of the South Pacific in a species of whirligig beetle that tends to confine its whirligigging to the vertical plane!

But arrive they did - all to pay tribute to the little people so aptly described by C J Dennis in 1917:

> Each Insect Thing that comes in the Spring
> To Gladden this sad Earth
> It Flits and Whirls and Pipes and Skirls
> It Chirps its Mocking Mirth
> A Merry song, the Whole day Long.

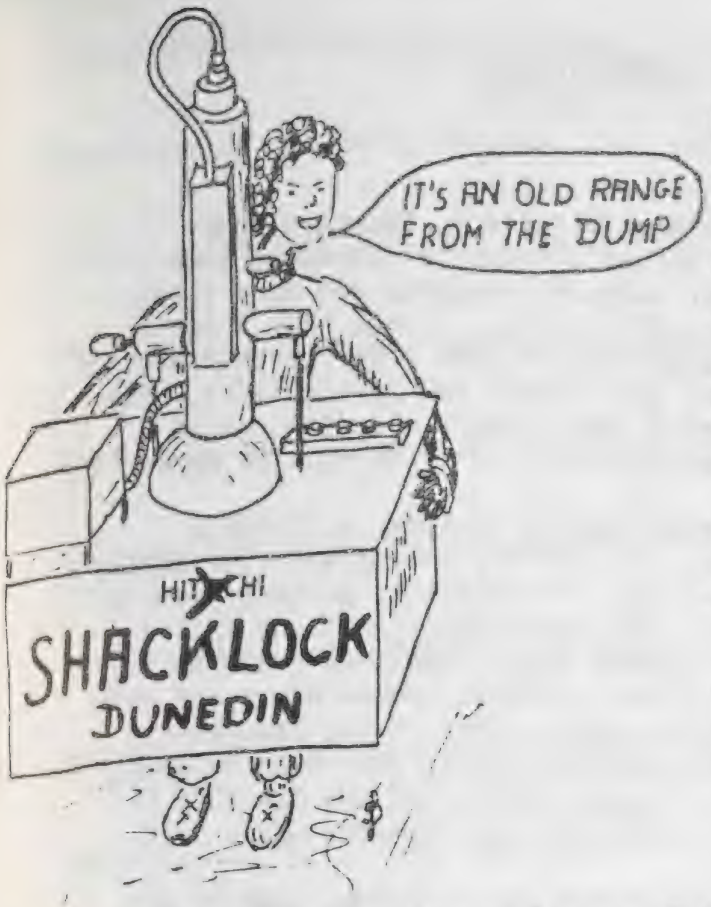
So eventually we all assembled by our devious ways at the massive Institute of Technology. What a lovely warm welcome awaited each one of us. Much kindness after a long journey. Even late at night "Get settled in your room and then come down and have a meal". Round the corner lived a most obliging spider; you wiggled her web, then down she came. Opened her huge yellow mouth and swallowed you whole. Up her thread she went and stopped! and stayed stopped. She then proceeded to digest you and just as one was getting worried, she gave a hiccough, dropped three inches, and disgorged you with a burp, at the right floor. One felt like apologising for being indigestible.

What a delicious and unexpected meal at 10 PM (For us, not the spider). The bedroom was warm, very comfortable, with a huge desk and many fluorescent lights and cupboards - I could have holed up for a year.

The whole conference went like a millipede, it flowed so smoothly along - Susan Millar and others must have spent a great deal of time, thought and effort into organising such a complex undertaking. Thank you, and the staff, so very much. Congratulations to Susan for all the work she has done and also being elected a life member of the Society.

Most of our time was spent in the lecture theatre, a big complex protruding, for all the world, like the nose of a cicada, from the front of the building. (The red ocelli appeared after the Conference dinner).

Congratulations to all those who read papers: Each was clear progressive and excellently researched. It must have been a time of tension for those reading their first paper in front of so many eminent entomologists. Every one was completely professional, and very interesting. The fantastic story of the cannabis saga held us all enthralled - very well told and illustrated. One day it might make a great book or even a film.



And a piece of luck, for me, at least, was the intermingling of the ENTSOC and EMCOM conferences at mealtime. I am crazy about Electron Scanners. My attention was drawn to a peculiar phenomenon that I could not at first explain. The toast manufactured by the massive toast engines, when made for ENTSOC appeared to be very anaemic whereas the toast produced for EMCOM was a deep golden colour. Then it dawned - of course, EMCOM would have a splutter coater hidden somewhere and they were gold plating theirs!

My side project, for the trip was to acquire an SEM but unfortunately Gracefield must have got wind of this and had taken both of theirs to pieces.

(But Officer, it's only an old kitchen stove I'm taking home). Dr Mayland went to much trouble to show me the microscopes and ancillary equipment -utterly fascinating. One day I hope to see one operating but I will probably be handcuffed!.

Of course I became stuck again but not in a waste paper basket, but in Wellington. The storm stopped the ferries etc. One advantage that Wellington has over the waste paper basket is that the film "Dark Chrystal" was on. I thought it was excellent - especially the sort of insect things.

I enjoyed every moment of the Conference. A most interesting and happy time. Met so many lovely people. Thank you all very much.

THE WETA, 1983 6(2) 68-69

STANDARD NAMES FOR COMMON INSECTS

In 1977 the Entomological Society published Bulletin 4, Standard Names for Common Insects of New Zealand, its second attempt to introduce some standardization in the use of vernacular names for insects and some other terrestrial invertebrates, particularly pest species. Since then a number of introduced insects of some general significance have been found in New Zealand and, with the intensification of agriculture and horticulture, have become of interest to applied entomologists and growers with the result that there is a continuing need for updating our list of vernacular names.

At the Annual General Meeting of the Entomological Society, a Standing Committee on Common Names was established to consider appropriate vernacular names for insects and those other terrestrial invertebrates generally dealt with by entomologists, in the wide sense. The committee intends to follow the principle established by the former common names committee under the convenership of Dr D.N. Ferro in establishing suitable common names and will consult with appropriate interested parties where there is any controversy over choice of an appropriate name. The committee will, from time to time, publish "Additions to Standard Names for Common Insects of New Zealand" in "The Weta" with a view to an eventual revision of the standard names list.

The committee welcomes submission of appropriate insect common name cases, either new cases, i.e. insects without agreed vernacular names in New Zealand or, more reluctantly, changes to vernacular names, if the previously agreed name can be shown to be completely inappropriate. In this latter case strong supporting documentation would be helpful.

Additions to standard names for common insects of New Zealand
Bulletin 4 Entomological Society of New Zealand

Aglossa caprealis (Hübner) - Pyralidae (LEPIDOPTERA)
murky meal moth

Coelophora inaequalis (Fabricius) - Coccinellidae (COLEOPTERA)
maltese cross ladybird

Cryptolaemus montrouzieri Mulsant - Coccinellidae (COLEOPTERA)
mealybug ladybird

Frankliniella occidentalis (Pergande) - Thripidae (THYSANOPTERA)
western flower thrips

Harmonia antipoda (Mulsant) - Coccinellidae (COLEOPTERA)
antipodean ladybird

Hercinothrips femoralis (Reuter) - Thripidae (THYSANOPTERA)
banded greenhouse thrips

Latrodectus hasselti Thorell - Theridiidae (ARANEAE)
redback spider

Metopolophium dirhodum (Walker) - Aphididae (HEMIPTERA)
rose grain aphid

Pseudanaphothrips achaetus (Bagnall) - Thripidae (THYSANOPTERA)
hairless flower thrips

Ptinus clavipes Panzer - Ptinidae (COLEOPTERA)
brown spider beetle

Sceliodes cordalis Doubleday - Pyralidae (LEPIDOPTERA)
poroporo fruitborer

Spaericus gibboides (Boieldieu) - Ptinidae (COLEOPTERA)
humped spider beetle

Stathmopoda plumbiflua Meyrick - Stathmopodidae (LEPIDOPTERA)
leadlined featherfoot

Stathmopoda skelloni Butler - Stathmopodidae (LEPIDOPTERA)
yellow featherfoot

Stathmopoda sp. (*skelloni* auctt. nec Butler) - Stathmopodidae (LEPIDOPTERA)
garden featherfoot

Therioaphis maculata (Buckton) - Aphididae (HEMIPTERA)
spotted alfalfa aphid

Thrips australis (Bagnall) - Thripidae (THYSANOPTERA)
gumtree thrips

Thrips imaginis Bagnall - Thripidae (THYSANOPTERA)
plague thrips

Trigonogenius globulus Solier - Ptinidae (COLEOPTERA)
globular spider beetle

The Common Names Committee members are:-

Convener - Rowan Emberson, Dept of Entomology, Lincoln College
ex officio - Allen Heath, Wallaceville Animal Research Centre
Peter Maddison, Entomology Division, Auckland
Ken Somerfield, Plant Health Diagnostic Station, Lincoln
Charles Watt, Entomology Division, Auckland

THE WETA, 1983 6(2) 70-71

A REVIEW OF RECORDS OF SPIDER BITES ON HUMANS IN NEW ZEALAND INCLUDING SOME PREVIOUSLY UNPUBLISHED RECORDS

M. O'DONNELL
Plant Health Diagnostic Station
Ministry of Agriculture & Fisheries
LINCOLN

The serious effects of the bite of the Katipo spider (Latrodectus katipo Powell)are well known. Hornabrook(1951) gives a detailed historical review and the Department of Health publishes periodic statistical information in their publications(see references). In the period 1967-76 there were 23 cases of hospitalisation following katipo bites. During the same period there were a further 14 cases of hospital admissions following bites by other spiders (usually unidentified). The potential importance of the red-back spider (L. hasselti Thorell) as a danger to humans if it becomes established in New Zealand is well documented.(Sutherland and Trinca, 1978.)

Most spiders possess poison glands and are capable of biting humans provided their chelicerae are sufficiently powerful to penetrate human skin but because of behavioural patterns, some spiders will not bite anything other than insects caught in their webs. There are however, a few recorded instances in New Zealand of spiders, other than katipo, biting humans with significant effect. (Myers, 1927, Chamberlain, 1947 in Watt,1971) These were:

Dipoena blattea Urquhart (Theridiidae)
Hexathele hochstetteri Ausserer
Porrhothele antipodiana Walckenaer(Dipluridae)
Ixeuticus subfasciatus (syn. I.martius) Simon(Desiidae)
Cambridgea foliata Koch (Stiphidiidae)

In addition, Watt describes the effects of bites on himself by a Miturga sp. (Clubionidae) and Dysdera crocata Koch (Dysderidae). Forster and Forster (1973) add Araneus pustulosus Walckenaer and A. transmarina syn. A. brouni (Araneidae). More recently Sunde (1980) describes four cases from the Auckland region of bites from Lampona cylindrata Koch (Gnaphosidae).

Recent submissions to the Plant Health Diagnostic Stations at Auckland, Levin and Lincoln have confirmed the aggressiveness of some of the above species and have provided a few additional records as follows:

(1) Chiracanthium stratioticum Koch (Clubionidae)
On 26 January 1979 a 2½ year old by was admitted to the Christchurch hospital overnight following a bite on the hand. The boy was said to be playing with spider webbing when the spider rushed out and bit him. The bite was initially painful and part of the hand swelled up. A number of species of this genus are known overseas to inflict painful bites with severe effects. (R R Forster, pers.com). Another Clubionid, a Miturga sp. has been recorded twice in New Zealand, inflicting bites. In contrast the native Uliodon sp (Clubionidae) was recorded as biting a man at Wanganui on 12 September 1982 with no apparent effect.

(2) Unidentified Salticidae
In Auckland on 27 March 1979 a person(age and sex unknown) was bitten, resulting in swelling and pustules around site of bite.

(3) Trite sp(Salticidae)
At Dannevirke on 12 April 1983 a woman was bitten on the leg resulting in swelling and pain.
Ebeling (1975) records one case of a bite by a Salticid in the United States.

(4) Steatoda sp. (Theridiidae)
Since 1981 there have been three records from the Auckland area of minor but painful bites.

In addition further records are available from species already known to bite:

(1) Araneus pustulosus (Araneidae)
Five records have been received including two when a significant effect was caused. Overseas cases of bites are recorded from the USA from an Araneus sp. (Ebeling,1975) and from Australia from A. transmarinus (Southcott 1973).

(2) Dysdera crocata (Dysderidae.)
There are four records of bites including one from Auckland where a man was bitten resulting in swelling and severe pain. Cook (1965) states that "Dysdera is one of the few spiders that will attack rather than retreat from molestation. This aggressiveness combined with the imposing size of the Chelicerae, has given Dysdera an undeserved reputation". Mascord (1970) states that several severe bites have been recorded from this species in Australia.

(3) Lampona cylindrata (Gnaphosidae)
A further record occurred in Auckland on 10 May 1983 when 2 members of a family were bitten. Symptoms were said to be diarrhoea, severe itching, reddening and swelling of the body. This spider has also been responsible for severe bites in Australia (Mascord,1970).

Another case of a bite from a Miturga sp. was obtained from an article in Treeline (1981) which describes a female school teacher being bitten when she was on Mt Fyffe near Kaikoura. The symptoms were described as dizziness and nausea and she was hospitalised for four hours.

The dangers from spider bites in New Zealand can be put in perspective by comparison with Australia. Two deaths from katipo bites were reported in New Zealand in the eighteenth century. Both records are second hand and the deaths occurred many years prior to the dates of the reports. (Hornabrook , 1951). As far as can be ascertained (Department of Health , Occasional paper 19, 1982) no other deaths from spider bites have been recorded in NZ. By contrast, in Australia, Atrax robustus Cambridge (Sydney funnel web spider) has been responsible of 10 deaths up to 1970. No specific antivenenes are available against this spider (Mascord, 1970).. The redback spider (L.hasselti) was responsible for 13 deaths up to 1959 in Australia. An antivenom to this spider has now been produced and has prevented further deaths. Mascord also records severe bites from Australian spiders not established in NZ, including A. formidabilis Rainbow (tree funnel web spider),

Selenocosmia crassipes (Bird eating spider). The violin spider (Loxosceles reclusa) Gertsch, which has recently become established in Australia has been responsible for many unpleasant bites in the USA (Ebeling, 1975).

It is interesting to note that Ixeuticus robustus Koch which is established in parts of the North Island has not been associated with biting records in NZ although it has been responsible for severe bites in Australia. (Mascord, 1970)

ACKNOWLEDGEMENTS

Permission from Mr P S Dale, Officer in Charge, Auckland Plant Health Diagnostic Station; and Mr D C M Manson, Entomologist, Levin PHDS, to publish records from their specimen files is much appreciated.

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AUCKLAND BRANCH REPORT

Currently our memberships stands at 82, most of whom are financial! Of these, 39 are employed in entomology (DSIR, MAF, University, Museum, or are retired entomologists); the rest are from many different fields of employment or are students. 37 of our members also belong to the parent body.

Or financial situation is healthy and rather than raise subs we printed our years programme in advance - this has also resulted in a considerable saving on postage.. We are also trying an 'honesty box' for tea and coffee at meetings.

This year, meetings will be held on the 4th Wednesday of each month, to make it easier for members to plan social events.

We have run out of stocks of net bags and plastzote but still have a few containers left and plenty of Ent.Soc. cards and calendars plus a few copies of "An Illustrated Guide to Soil Animals". No decisions have been made regarding the continuation of such sales.

O R Green

AUCKLAND BRANCH ACTIVITIES SINCE LAST ISSUE

February

After our AGM, John Clearwater gave a talk on "Male Pheromones in Noctuid Moths", well illustrated with slides of electron micrographs and some cooperative live models. Everyone had whiff of the pheromone concentrate with various comments.

A field trip to Miranda; not very well attended but very sucessful for those who went. This part of an insect survey by the branch for the Miranda Naturalist Trust. The party spent a blazing day scouring the sand banks. The range was increased for one species of Pyralidae.

March

A meeting at the Auckland University with student Murray Potter speaking on "Native Termites of NZ and their Biology" He presented some very interesting results of his studies,

A field trip to Riverhead reserve to study aquatic insects, insects associated with nikau palms, tree ferns and other native plants. The party, over half of whom were junior members explored a new area of cabbage tree swamp and new tracks into the bush. Mark Buchanan found a male and female Ochetarcha miraculosa (See "The Weta", 1982, 5(2)49.)

April

Light trapping at Riverhead reserve for a few who braved the cold night. Two lights were set up and some searching in the bush. A good collecting night.

Pauline McColl, visiting Auckland from Lower Hutt, talked on "Soil Critter" in terms of habitats, - eg, "Cavemen", who use existing holes, "Gypsies" who carry a protable shelter. We held our first Insect collectors competition on this occasion and it was judged by Helen and Graeme Ramsay. Although there were not many entries, all were most presentable and winning entrants received a certificate.

Weekend trip to Whangarei and Kerikeri: Friday night we were hosted by Roddy Blank and Murray Olsen; two light traps were run, one at Parahaki and the other at a MAF research station. Saturday was hosted by Mr and Mrs E C S Little at their home "Aroha". We rowed out to do some collecting on Wainui, Moto Tapu and Motuti Islands in the Kerikeri Inlet. On Sunday we visited Mrs Clark and her organic orchard. Insect pests were conspicuous by their absence and a high number of predators and parasites were seen.

May
Visit to Cornwallis on a cold and windy, showery day with little insect life about. A significant find by Andrew Allen was a box of gym shoes - all for the same foot - hidden after being stolen.

June
Uri Gerson talked about "Mites on Mosses and Ferns" with the conclusion that these plant groups are undersampled habitats. One example he gave was of mites surviving on moss 5 feet under snow in Montreal.

Insect identification session with MARC. Curator Trevor Crosby talked briefly about what is involved in identifying insects then everyone went upstairs to look at the NZAC Three amateur members brough specimens to be identified.

July
Riverhead again; a joint trip with the Botanical Society. The aim this time was to look at insects associated with fungi. There were certainly plenty of fungi, the basket fungi being particularly spectacular. It was good to have the various kinds pointed out by very knowledgeable people. It was a fine clear day though still wet underfoot and ankle deep in mud along the driveway near the entrance of the reserve. Many different species of insect were collected.

A meeting at Auckland University with student Mark Goodwin talking about his thesis work on honeybee behaviour. He has been comparing hypotheses of bees taking messages to the hive by means of the bee dance or olfactory signals.

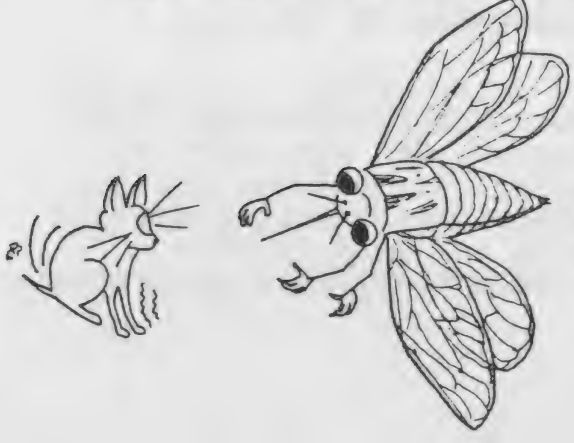
********** **********

NEW THREAT TO PETS

Extract from a letter received by Entomologists at MAF Plant health Diagnost Station, Mt Albert:

Dear Sirs

This morning I trod on this, thinking it was a cricket and a danger to my Chihuahua. Is it something new? A danger perhaps? It is the biggest "fly" I've ever seen.



The insect enclosed with the above letter was one of our native cicadas (somewhat flattened) - an insect species not yet recorded as preying on Chihuahuas - but who knows? Perhaps the sight of cicadas carrying off defenceless Chihuahuas may yet become a commonplace sight!

R G Sunde

DISPLAY BOX

EXHIBITS AT RECENT AUCKLAND BRANCH MEETINGS

26:01:83 Two wall-frame boxes of Lepidoptera from Taiwan (a Christmas gift) (Sian Loh). Unidentified insects collected at Matuku Reserve (Olwyn Green). Assorted insects illustrating a talk entitled "Small is Beautiful" (Derek Russell). Display of newsletters from Miranda Naturalist Trust for next field trip (secretary). A kiwi and its insect dinner (Ruud Kleinpaste - speaker).

23:02:83 A last instar *Hyalophora cecropia* caterpillar in alcohol (Ruud Kleinpaste). Two wall-frame boxes of Australian Lepidoptera (a Christmas gift) (Mark Buchanan). A box of *Vespula germanica* and *V. vulgaris* workers, queens and males (Errol Valentine). Pheromone concentrate, live and dead moths under microscope (John Clearwater - speaker).

23:03:83 Live Avondale spider (Grace Hall). Small nest of *Bombus ruderatus* (Mark Buchanan). Recent news clippings and newsletters from E.A.R. (secretary). Termite colonies (Murray Potter - speaker).

27:04:83 South Island Hepialid moths and slides of newly emerged *Ochetarcha miraculosa* (John Dugdale). Mites infesting dried apricots (P.H.D.S.) Ant-like beetle (Olwyn Green). Miscellaneous and 'rare' insects from home garden (Stephen Thorpe). *Dolomedes* sp. spider from Chatham Island (Ruud Kleinpaste). Insect Collectors' Competition entries (all entrants). Very large worms (Pauline McColl - speaker).

01:06:83 Live *Cormocephalus* centipede (Mark Buchanan). Live insects from last field trip to Cornwallis (Andrew Allen). Articles on worms (Nicholas Martin). Various mite and damage examples (Uri Gerson - speaker).

22:06:83 No display table. Specimens collected by various members for identification using N.Z.A.C.

27:07:83 Poster display and observation hive (Mark Goodwin - speaker).

TABLE TOP PETS

O R Green
Entomology Division DSIR
Private bag Auckland

In mid-November 1982, when the little grass stem anthribids, *Euciodes suturalis*, were flying, we found many of them included in sweepings of pasture which we were checking for the spotted alfalfa aphid. I became fascinated by the extraordinarily long antennae of the males (Penman, 198) and wondered how on earth they cope with such out-of-proportion appendages. They were suffering from excess heat and humidity on arrival at our lab. and not really coping very well even with their legs. I took one of the little males home to watch it move around and while having dinner, let it out of its container onto an envelope. He amused us for the duration of the meal by walking to the edge of the paper, then turning around and walking back to another edge. Never once setting foot onto the tablecloth (perhaps the colour didn't please him!). Most of the time he held his antennae erect and slightly forward waving from side to side (was he picking up vibes or maintaining his balance?) Every so often he appeared to trip ove them as they got too low, and did not stop to re-adjust antennal height but kept walking, each pair of feet eventually stepping over them until they were dragging along underneath his body and trailing out behind.

After several minutes of travelling in this manner, he would stop and physically pull his antennae "out front" again with his front legs and carry on. The longer I watched the more convinced I was that he simply put them"out back" when he didn't need them or was tired of holding them erect, and that they really are an awkward nuisance!

Another table top pet we watched last summer was the strange rectangular colydiid beetle , *Rhitidinotus squamulosus* which walked around the edge of a square ceramic and cork tile. He insisted on walking along the vertical face which made cornering rather difficult. I have often admired the way drivers of articulated vehicles manoeuvre around a tight corner but watching this rigid beetle makes a truck driver's life look pretty simple.

Reference

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EATERS OF LONGHORN LARVAE

Wendy Pond

47 Makora Waiheke Island

In Fiji, Futuna, Niuafo'ou and Sāmoa large longhorn beetles of Olethrius spp. produce wood-boring grubs which are eaten with relish, as is the huhu grub of Prionoplus reticularis in New Zealand. In Niuafo'ou, these grubs are called afato or 'ofato, and are prized as a delicacy when the larva is fully grown and has stopped eating, preparatory to becoming a pupa. In NZ, the cognate word awhato is given to 'vegetable caterpillars', the larvae of Porina spp. invaded by Cordyceps fungus.

This pop song was composed by Kitione Mamata, a Tongan Wireless operator, during a term of service in Niuafo'ou. It was sung at kava parties by the Malua-o-Vailahi group.

'OFATO

'Ofato ko e mafi 'ofato totolo
Ka foto 'o ka soso
'Eke 'e ha sola ko si'ene fie'ilo
Fanongo he hake pea mo e hifo
'I si'ono 'eke'i holo pē ko e hā hono ifo
Tama 'oua e pehe'i si'oto kakala manako.

'Ofato afenga 'o si'ete faka'aho
Tu' he la'a tu'u he hako
Ke toli mo fili hao manako 'ene anganofo he taulalo
Viki e lelei fakama'unga ki ai 'ete manako
Taha'i kuonga ne lato he foaki 'a e taumama'o
Pohopoho lava, ko ia koa ho fakamalo?

'Ofato hingoa 'o si'ete sia ngako
'Efinga si'ete 'ilo
Pitenga si'oto ifo, punунga'anga 'o e manako
'Ofa loto 'i si'oto mahu he 'ikai ngalo
Fiu hono kumi holo, ta na'a te tuku 'i loto
Ki si'ete kopate malu ko e 'akau popo he vao

Kitione Mamata, 1967

And the English translation by Wendy Pond -

'Ofato, the champion creeping grub
Appearing amongst crowds
The inquisitive visitor wants to know,
Having heard in the comings and goings
Having asked around, what does it taste like?
Fellow, don't mention my favourite grub.

'Ofato, my diversion at luncheon
Be it fine, be it windy
Take your pick from its compliant lowly haunt
Praise its excellence, the mainstay of my craving
Each generation was satisfied with God's creation
Goodness gracious, was that His gift?

'Ofato, my jar of dripping
My hamper of food
Metropolis of my taste, nest of desire
From love of plenitude, never forgotten
Fed up with searching? Look! I left it here inside
My coolsafe, the bush-felled rotten wood.

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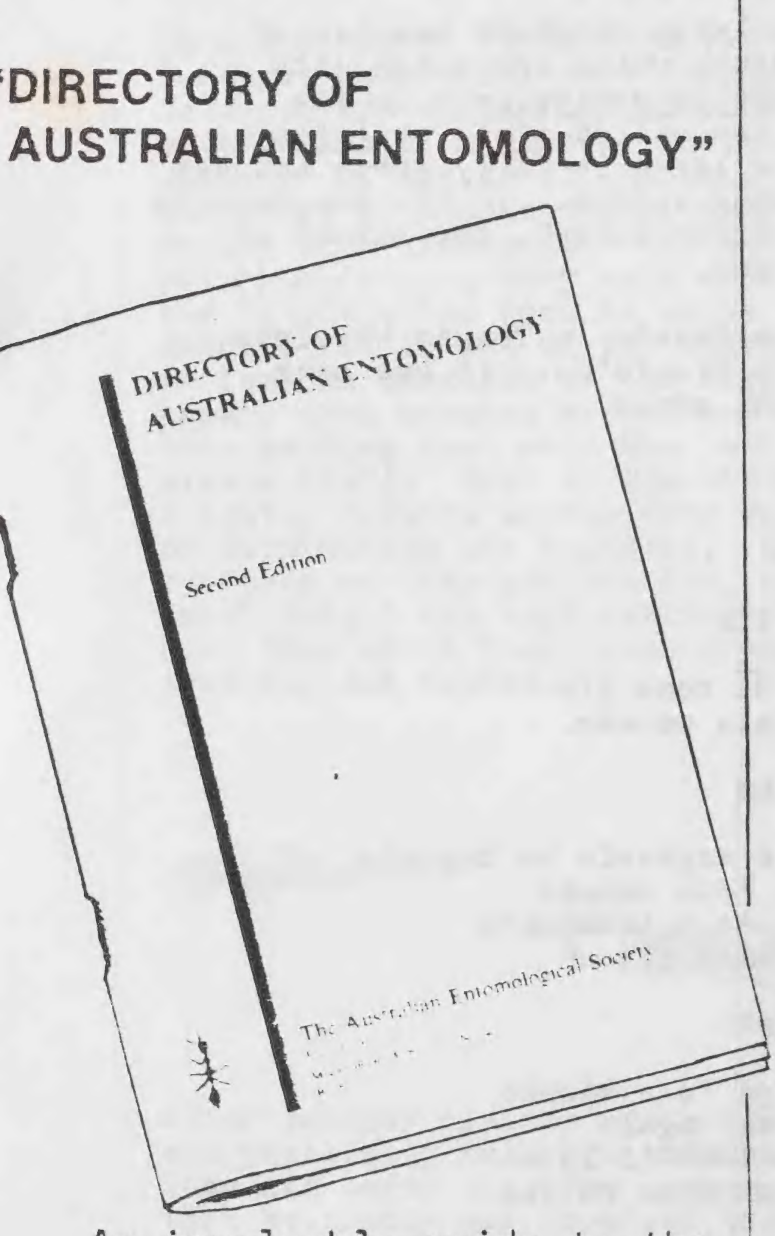

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ASSOCIATION OF PACIFIC SYSTEMATISTS

The Association of Pacific Systematists was officially formed at the 15th Pacific Science Congress held in Dunedin, New Zealand, in February of this year. Mr J.S. Dugdale of DSIR Entomology Division, Auckland, has been appointed Interim President and Dr S.H. Sohmer of the Bishop Museum, Honolulu has been appointed Interim Secretary/Treasurer. The initial aims of the Association are:

1. To promote and faciliate communication amongst Pacific systematists including the production and distribution of a newsletter.

2. To represent Pacific systematists as a group with respect to opinions on relevant issues.

3. To carry out other functions as may be considered desirable.

The Association has been formed in response to the magnitude of the curatorial-research tasks of systematists and the ineffective current levels of staff and finance in this area.

The time has now come to officially solicit membership in the Association. The annual subscription has been set at $US5 per annum. The first tangible results of membership will be a Newsletter that will be sent to members before the end of the year. Those interested should contact:

Dr S.H. Sohmer
Department of Botany
Bishop Museum
P.O. Box 19000-A
Honolulu HAWAII 96819
USA

J.D. Tenquist, Editor
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NOTICE TO CONTRIBUTORS

The 'Weta' is a scientific supplement. Editing is kept to a minimum and authors are responsible for the accuracy of their statements. Manuscripts, where possible should be typed double-spaced, on Standard A4 paper, and on one side of the page only.

Authors with access to typing services are requested to supply manuscripts single spaced on A4 paper, using a typeface with ten characters to the inch.

High contrast black and white photos or penned line drawings are acceptable. Closing date for copy is 20th February and 20th August each year. Manuscripts received after those dates may be held over until the following issue.

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